

RESENE ETCH PRIMER

RESENE AUTOMOTIVE & LIGHT INDUSTRIAL

Version No: 1.1

Safety Data Sheet according to HSNO Regulations

Issue Date: 13/07/2020

Print Date: 14/07/2020

L.GHS.NZL.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

| | |
|-------------------------------|--|
| Product name | RESENE ETCH PRIMER |
| Synonyms | Incl. All colours |
| Proper shipping name | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| Other means of identification | Not Available |

Relevant identified uses of the substance or mixture and uses advised against

| | |
|--------------------------|------------------|
| Relevant identified uses | 9457, 7001, 7215 |
|--------------------------|------------------|

Details of the supplier of the safety data sheet

| | |
|-------------------------|--|
| Registered company name | RESENE AUTOMOTIVE & LIGHT INDUSTRIAL |
| Address | 32-50 Vogel Street Naenae Wellington New Zealand |
| Telephone | +64 4 5770500 |
| Fax | +64 4 5773327 |
| Website | www.resene.co.nz |
| Email | advice@resene.co.nz |

Emergency telephone number

| | | |
|-----------------------------------|--------------------------|------------------------------|
| Association / Organisation | NZ POISONS (24hr 7 days) | CHEMWATCH EMERGENCY RESPONSE |
| Emergency telephone numbers | 0800 764766 | +64 800 700 112 |
| Other emergency telephone numbers | 0800 737636 | +61 2 9186 1132 |

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

| | |
|---|--|
| Classification [1] | Specific target organ toxicity - single exposure Category 2, Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 3, Flammable Liquid Category 2, Serious Eye Damage Category 1, Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Reproductive Toxicity Category 1, Germ cell mutagenicity Category 2, Acute Vertebrate Hazard Category 3 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |
| Determined by Chemwatch using GHS/HSNO criteria | 3.1B, 6.1D (oral), 6.3A, 8.3A, 6.6B, 6.8A, 6.9B, 9.1D, 9.3C |

Label elements

| | |
|---------------------|---|
| Hazard pictogram(s) |  |
| SIGNAL WORD | DANGER |

Hazard statement(s)

| | |
|------|---|
| H371 | May cause damage to organs. (Oral, Dermal, Inhalation) |
| H373 | May cause damage to organs through prolonged or repeated exposure. (Oral, Dermal, Inhalation) |
| H402 | Harmful to aquatic life. |
| H225 | Highly flammable liquid and vapour. |
| H318 | Causes serious eye damage. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |

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| H360 | May damage fertility or the unborn child. |
| H341 | Suspected of causing genetic defects. |
| H433 | Harmful to terrestrial vertebrates. |

Precautionary statement(s) Prevention

| | |
|------|--|
| P201 | Obtain special instructions before use. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P233 | Keep container tightly closed. |
| P260 | Do not breathe mist/vapours/spray. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharges. |
| P270 | Do not eat, drink or smoke when using this product. |

Precautionary statement(s) Response

| | |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor/physician/first aider. |
| P321 | Specific treatment (see advice on this label). |
| P370+P378 | In case of fire: Use alcohol resistant foam or normal protein foam to extinguish. |
| P308+P311 | IF exposed or concerned: Call a POISON CENTER/doctor/physician/first aider. |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. |
| P330 | Rinse mouth. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

Precautionary statement(s) Storage

| | |
|-----------|--|
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |

Precautionary statement(s) Disposal

| | |
|------|--|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|------|--|

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Ingredients are required by the Hazard Substances (Safety Data Sheets) Notice 2017 to be identified:

Mixtures

| CAS No | %[weight] | Name |
|-----------|-----------|--------------------------------|
| 108-95-2 | 0.1-1 | <u>phenol</u> |
| 67-63-0 | 20-40 | <u>isopropanol</u> |
| 95-63-6 | 1-10 | <u>1,2,4-trimethyl benzene</u> |
| 1330-20-7 | 1-10 | <u>xylene</u> |
| 872-50-4 | 0.1-1 | <u>N-methyl-2-pyrrolidone</u> |

SECTION 4 FIRST AID MEASURES

Description of first aid measures

| | |
|-------------|---|
| Eye Contact | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing for at least 15 minutes. ▶ Transport to hospital or doctor without delay in event of irritation. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
|-------------|---|

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| Skin Contact | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▶ Quickly remove all contaminated clothing, including footwear. ▶ Wash skin and hair with running water. ▶ Transport to hospital, or doctor in event of irritation. |
| Inhalation | <p>If aerosols, fumes or combustion products are inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop seek medical attention.</p> |
| Ingestion | <ul style="list-style-type: none"> ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. ▶ If swallowed do NOT induce vomiting. ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▶ Observe the patient carefully. ▶ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▶ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▶ Seek medical advice. |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

- ▶ Alcohol stable foam.

Special hazards arising from the substrate or mixture

| | |
|-----------------------------|--|
| Fire Incompatibility | <ul style="list-style-type: none"> ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|-----------------------------|--|

Advice for firefighters

| | |
|------------------------------|---|
| Fire Fighting | <ul style="list-style-type: none"> ▶ Alert Fire Brigade and tell them location and nature of hazard. |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ Liquid and vapour are highly flammable. <p>Combustion products include: carbon dioxide (CO₂) other pyrolysis products typical of burning organic material.</p> |

SECTION 6 ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

| | |
|---------------------|---|
| Minor Spills | <p>Remove all ignition sources. Contain spill with inert non- combustible absorbent then place in suitable, labelled container for waste disposal. Wipe up. Clean area with large quantity of water to complete clean- up.</p> |
| Major Spills | <p>Remove all ignition sources. Clear area of personnel and move upwind. Wear appropriate personnel protective equipment and clothing to prevent exposure. Avoid breathing in mists or vapours and skin or eyes contact. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non- combustible material onto spillage. Use clean non- sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authority.</p> |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE**Precautions for safe handling**

| | |
|--------------------------|---|
| Safe handling | <ul style="list-style-type: none"> ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Electrostatic discharge may be generated during pumping - this may result in fire. ▶ Avoid unnecessary personal contact, including inhalation. ▶ DO NOT allow clothing wet with material to stay in contact with skin |
| Other information | <ul style="list-style-type: none"> ▶ Store in original containers in approved flame-proof area. |

Conditions for safe storage, including any incompatibilities

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| Suitable container | <ul style="list-style-type: none"> ▶ Packing as supplied by manufacturer. |
|---------------------------|--|

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Storage incompatibility

- ▶ reacts violently with strong oxidisers, strong acids, strong caustics.
- ▶ attacks some plastics, rubber and coatings
- ▶ may generate electrostatic charges

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|------------------------|------------------------|---------------------|----------------------|---------------|----------------------|
| New Zealand Workplace Exposure Standards (WES) | phenol | Phenol | 5 ppm | Not Available | Not Available | skin-Skin absorption |
| New Zealand Workplace Exposure Standards (WES) | isopropanol | Isopropyl alcohol | 400 ppm / 983 mg/m3 | 1230 mg/m3 / 500 ppm | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | xylene | Dimethylbenzene | 50 ppm / 217 mg/m3 | Not Available | Not Available | Not Available |
| New Zealand Workplace Exposure Standards (WES) | N-methyl-2-pyrrolidone | 1-Methyl-2-pyrrolidone | 25 ppm / 103 mg/m3 | 309 mg/m3 / 75 ppm | Not Available | skin-Skin absorption |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|-------------------------|---|---------------|---------------|---------------|
| phenol | Phenol | Not Available | Not Available | Not Available |
| isopropanol | Isopropyl alcohol | 400 ppm | 2000* ppm | 12000** ppm |
| 1,2,4-trimethyl benzene | Permafluor E+ | 140 mg/m3 | 360 mg/m3 | 2,200 mg/m3 |
| 1,2,4-trimethyl benzene | Trimethylbenzene, 1,2,4-; (Pseudocumene) | Not Available | Not Available | 480 ppm |
| xylene | Xylenes | Not Available | Not Available | Not Available |
| N-methyl-2-pyrrolidone | Methyl 2-pyrrolidinone, 1-; (N-Methylpyrrolidone) | 30 ppm | 32 ppm | 190 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|-------------------------|---------------|---------------|
| phenol | 250 ppm | Not Available |
| isopropanol | 2,000 ppm | Not Available |
| 1,2,4-trimethyl benzene | Not Available | Not Available |
| xylene | 900 ppm | Not Available |
| N-methyl-2-pyrrolidone | Not Available | Not Available |

OCCUPATIONAL EXPOSURE BANDING

| Ingredient | Occupational Exposure Band Rating | Occupational Exposure Band Limit |
|-------------------------|-----------------------------------|----------------------------------|
| 1,2,4-trimethyl benzene | E | ≤ 0.1 ppm |

Notes: Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

MATERIAL DATA

IFRA Prohibited Fragrance Substance

The International Fragrance Association (IFRA) Standards form the basis for the globally accepted and recognized risk management system for the safe use of fragrance ingredients and are part of the IFRA Code of Practice.

For o-cresol:

Odour Threshold Value: Variously reported as 0.00068 ppm and 0.68 ppm.

for N-methyl-2-pyrrolidone (NMP):

Reports of skin and eye irritation and chronic headaches have been reported in workers exposed to 1-methyl-2-pyrrolidone.

for propylene glycol monomethyl ether (PGME)

Odour Threshold: 10 ppm.

For trimethyl benzene as mixed isomers (of unstated proportions)

Odour Threshold Value: 2.4 ppm (detection)

Use care in interpreting effects as a single isomer or other isomer mix.

Exposed individuals are **NOT** reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Threshold Value for phenol: 0.060 ppm (detection)

NOTE: Detector tubes for phenol, measuring in excess of 1 ppm, are commercially available.

Odour Threshold Value: 3.3 ppm (detection), 7.6 ppm (recognition)

Exposure at or below the recommended isopropanol TLV-TWA and STEL is thought to minimise the potential for inducing narcotic effects or significant irritation of the eyes or upper respiratory tract.

For n-butanol:

Odour Threshold Value: 0.12-3.4 ppm (detection), 1.0-3.5 ppm (recognition)

NOTE: Detector tubes for n-butanol, measuring in excess of 5 ppm are commercially available.

For ethylene glycol monobutyl ether (2-butoxyethanol)

Odour Threshold Value: 0.10 ppm (detection), 0.35 ppm (recognition)

Although rats appear to be more susceptible than other animals anaemia is not uncommon amongst humans following exposure.

for xylenes:

IDLH Level: 900 ppm


Odour Threshold Value: 20 ppm (detection), 40 ppm (recognition)

NOTE: Detector tubes for o-xylene, measuring in excess of 10 ppm, are available commercially.

Exposure controls

Continued...

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| Appropriate engineering controls | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
| Personal protection |  |
| Eye and face protection | ► Safety glasses with side shields. |
| Skin protection | See Hand protection below |
| Hands/feet protection | ► Wear chemical protective gloves, e.g. PVC. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. |
| Body protection | See Other protection below |
| Other protection | ► Overalls. ► Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. |

Respiratory protection

Respiratory protection required in insufficiently ventilated working areas and during spraying. An approved respirator with a replaceable vapour/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to AS/NZS 1715 Standard, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716 Standard, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Type A Filter (organic vapour) of sufficient capacity.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

| | | | |
|---|--------------------------------|--|---------------|
| Appearance | This product is a preparation. | | |
| Physical state | Liquid | Relative density (Water = 1) | 1.03-1.05 |
| Odour | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold | Not Available | Auto-ignition temperature (°C) | Not Available |
| pH (as supplied) | Not Available | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | 300-400 |
| Initial boiling point and boiling range (°C) | 87-92 | Molecular weight (g/mol) | Not Available |
| Flash point (°C) | 16-18 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | HIGHLY FLAMMABLE. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Available | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Available | Volatile Component (%vol) | 84 |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Immiscible | pH as a solution (1%) | Not Available |
| Vapour density (Air = 1) | Not Available | VOC g/L | 710-720 |

SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---------------|
| Reactivity | See section 7 |
| Chemical stability | ► stable. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 TOXICOLOGICAL INFORMATION**Information on toxicological effects**

Continued...

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|---------------------|---|
| Inhaled | <p>Strong evidence exists that exposure to the material may produce very serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by inhalation.</p> <p>Inhalation of vapours may cause drowsiness and dizziness.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> |
| Ingestion | Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result. |
| Skin Contact | <p>Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period.</p> <p>The material may accentuate any pre-existing dermatitis condition</p> <p>Toxic effects may result from skin absorption</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects.</p> |
| Eye | When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation. |
| Chronic | <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>There is sufficient evidence to provide a strong presumption that human exposure to the material may result in impaired fertility on the basis of: - clear evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects.</p> <p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Prolonged or repeated contact with xylenes may cause defatting dermatitis with drying and cracking.</p> |

| | | |
|--------------------------------|---|--|
| RESENE ETCH PRIMER | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| phenol | TOXICITY | IRRITATION |
| | dermal (rat) LD50: =525 mg/kg ^[2] | Eye(rabbit): 100 mg rinse - mild |
| | Inhalation (rat) LC50: 0.316 mg/l/4h ^[2] | Eye(rabbit): 5 mg - SEVERE |
| | Oral (rat) LD50: 317 mg/kg ^[2] | Skin(rabbit): 500 mg open -SEVERE |
| | | Skin(rabbit): 500 mg/24hr - SEVERE |
| isopropanol | TOXICITY | IRRITATION |
| | dermal (rat) LD50: =12800 mg/kg ^[2] | Eye (rabbit): 10 mg - moderate |
| | Inhalation (rat) LC50: 72.6 mg/l/4h ^[2] | Eye (rabbit): 100 mg - SEVERE |
| | Oral (rat) LD50: =4396 mg/kg ^[2] | Eye (rabbit): 100mg/24hr-moderate |
| | | Skin (rabbit): 500 mg - mild |
| 1,2,4-trimethyl benzene | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >3160 mg/kg ^[2] | Not Available |
| | Inhalation (rat) LC50: 18 mg/l/4h ^[2] | |
| | Oral (rat) LD50: 5000 mg/kg ^[1] | |
| xylene | TOXICITY | IRRITATION |
| | Dermal (rabbit) LD50: >1700 mg/kg ^[2] | Eye (human): 200 ppm irritant |
| | Inhalation (rat) LC50: 4994.295 mg/l/4h ^[2] | Eye (rabbit): 5 mg/24h SEVERE |
| | Oral (rat) LD50: 3523-8700 mg/kg ^[2] | Eye (rabbit): 87 mg mild |
| | | Eye: adverse effect observed (irritating) ^[1] |
| | | Skin (rabbit):500 mg/24h moderate |
| N-methyl-2-pyrrolidone | TOXICITY | IRRITATION |
| | dermal (rat) LD50: 2500-5000 mg/kg ^[2] | Eye (rabbit): 100 mg - moderate |
| | Inhalation (rat) LC50: 8290.5297 mg/l/4h ^[2] | |

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Oral (rat) LD50: 3914 mg/kg^[2]**Legend:**

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

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| RESENE ETCH PRIMER | for propylene glycol ethers (PGEs): Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM). Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series. |
| PHENOL | The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). |
| 1,2,4-TRIMETHYL BENZENE | Other Toxicity data is available for CHEMWATCH 12172 1,2,3-trimethylbenzene CHEMWATCH 2325 1,3,5-trimethylbenzene |
| XYLENE | Reproductive effector in rats |
| N-METHYL-2-PYRROLIDONE | for N-methyl-2-pyrrolidone (NMP): Acute toxicity: In rats, NMP is absorbed rapidly after inhalation, oral, and dermal administration, distributed throughout the organism, and eliminated mainly by hydroxylation to polar compounds, which are excreted via urine. |
| RESENE ETCH PRIMER & ISOPROPANOL | For isopropanol (IPA): Acute toxicity: Isopropanol has a low order of acute toxicity. |
| RESENE ETCH PRIMER & 1,2,4-TRIMETHYL BENZENE | For trimethylbenzenes: Absorption of 1,2,4-trimethylbenzene occurs after oral, inhalation, or dermal exposure. |
| PHENOL & XYLENE | The material may produce severe irritation to the eye causing pronounced inflammation. |
| PHENOL & ISOPROPANOL & 1,2,4-TRIMETHYL BENZENE & N-METHYL-2-PYRROLIDONE | Asthma-like symptoms may continue for months or even years after exposure to the material ceases. |
| PHENOL & ISOPROPANOL & XYLENE | The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. |
| ISOPROPANOL & XYLENE | The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). |

| | | | |
|--|---|---------------------------------|---|
| Acute Toxicity | ✓ | Carcinogenicity | ✗ |
| Skin Irritation/Corrosion | ✓ | Reproductivity | ✓ |
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | ✓ |
| Respiratory or Skin sensitisation | ✗ | STOT - Repeated Exposure | ✓ |
| Mutagenicity | ✓ | Aspiration Hazard | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| RESENE ETCH PRIMER | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--------------------|---------------|--------------------|---------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |

| phenol | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--------|----------|--------------------|-------------------------------|-------------|--------|
| | LC50 | 96 | Fish | 0.00175mg/L | 4 |
| | EC50 | 48 | Crustacea | ≈3.1mg/L | 1 |
| | EC50 | 96 | Algae or other aquatic plants | 0.0611mg/L | 4 |
| | BCF | 24 | Fish | 60mg/L | 4 |
| | EC10 | 504 | Crustacea | 0.05mg/L | 2 |
| | NOEC | 144 | Crustacea | 0.01mg/L | 4 |

| isopropanol | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|-------------|----------|--------------------|-------------------------------|-------------|--------|
| | LC50 | 96 | Fish | 9-640mg/L | 2 |
| | EC50 | 48 | Crustacea | 12500mg/L | 5 |
| | EC50 | 96 | Algae or other aquatic plants | 993.232mg/L | 3 |
| | EC0 | 24 | Crustacea | 5-102mg/L | 2 |
| | NOEC | 5760 | Fish | 0.02mg/L | 4 |

| 1,2,4-trimethyl benzene | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|-------------------------|----------|--------------------|-----------|-------------|--------|
| | LC50 | 96 | Fish | 1.318mg/L | 3 |
| | EC50 | 48 | Crustacea | ca.6.14mg/L | 2 |

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|------------------------|---|--------------------|-------------------------------|-------------|--------|
| | EC50 | 96 | Algae or other aquatic plants | 2.154mg/L | 3 |
| xylene | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | 2.6mg/L | 2 |
| | EC50 | 48 | Crustacea | 1.8mg/L | 2 |
| | EC50 | 72 | Algae or other aquatic plants | 3.2mg/L | 2 |
| | NOEC | 73 | Algae or other aquatic plants | 0.44mg/L | 2 |
| N-methyl-2-pyrrolidone | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
| | LC50 | 96 | Fish | 464mg/L | 1 |
| | EC50 | 48 | Crustacea | ca.4897mg/L | 1 |
| | EC50 | 72 | Algae or other aquatic plants | >500mg/L | 2 |
| | EC0 | 24 | Crustacea | >1-mg/L | 2 |
| | NOEC | 504 | Crustacea | 12.5mg/L | 2 |
| Legend: | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data | | | | |

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark.

for propylene glycol ethers:

Environmental fate:

Most are liquids at room temperature and all are water-soluble.

For 1,2,4-trimethylbenzene:

Half-life (hr) air : 0.48-16

Half-life (hr) H2O surface water : 0.24-672

Half-life (hr) H2O ground : 336-1344

Half-life (hr) soil : 168-672

Henry's Pa m3 /mol: 385-627

Bioaccumulation : not significant

1,2,4-Trimethylbenzene is a volatile organic compound (VOC) substance.

For aromatic hydrocarbons:

Within an aromatic series, acute toxicity increases with increasing alkyl substitution on the aromatic nucleus.

For isopropanol (IPA):

log Kow : -0.16- 0.28

Half-life (hr) air : 33-84

Half-life (hr) H2O surface water : 130

Henry's atm m3 /mol: 8.07E-06

BOD 5: 1.19,60%

COD : 1.61-2.30,97%

ThOD : 2.4

BOD 20: >70% * [Akzo Nobel]

Environmental Fate

Based on calculated results from a lever 1 fugacity model, IPA is expected to partition primarily to the aquatic compartment (77.7%) with the remainder to the air (22.3%).

For xylenes :

log Koc : 2.05-3.08

Koc : 25.4-204

Half-life (hr) air : 0.24-42

Half-life (hr) H2O surface water : 24-672

Half-life (hr) H2O ground : 336-8640

Half-life (hr) soil : 52-672

Henry's Pa m3 /mol: 637-879

Henry's atm m3 /mol: 7.68E-03

BOD 5 if unstated: 1.4,1%

COD : 2.56,13%

ThOD : 3.125

BCF : 23

log BCF : 1.17-2.41

Environmental Fate

Terrestrial fate:: Measured Koc values of 166 and 182, indicate that 3-xylene is expected to have moderate mobility in soil.

For glycol ethers:

Environmental fate:

Ether groups are generally stable to hydrolysis in water under neutral conditions and ambient temperatures.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|-------------------------|-----------------------------|-----------------------------|
| phenol | LOW (Half-life = 10 days) | LOW (Half-life = 0.95 days) |
| isopropanol | LOW (Half-life = 14 days) | LOW (Half-life = 3 days) |
| 1,2,4-trimethyl benzene | LOW (Half-life = 56 days) | LOW (Half-life = 0.67 days) |
| xylene | HIGH (Half-life = 360 days) | LOW (Half-life = 1.83 days) |
| N-methyl-2-pyrrolidone | LOW | LOW |

Bioaccumulative potential

Continued...

RESENE ETCH PRIMER

| Ingredient | Bioaccumulation |
|-------------------------|---------------------|
| phenol | LOW (BCF = 17.5) |
| isopropanol | LOW (LogKOW = 0.05) |
| 1,2,4-trimethyl benzene | LOW (BCF = 275) |
| xylene | MEDIUM (BCF = 740) |
| N-methyl-2-pyrrolidone | LOW (BCF = 0.16) |

Mobility in soil

| Ingredient | Mobility |
|-------------------------|-------------------|
| phenol | LOW (KOC = 268) |
| isopropanol | HIGH (KOC = 1.06) |
| 1,2,4-trimethyl benzene | LOW (KOC = 717.6) |
| N-methyl-2-pyrrolidone | LOW (KOC = 20.94) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|------------------------------|--|
| Product / Packaging disposal | <p>► Containers may still present a chemical hazard/ danger when empty. Legislation addressing waste disposal requirements may differ by country, state and/ or territory.</p> <p>► DO NOT allow wash water from cleaning or process equipment to enter drains.</p> <p>► Recycle wherever possible.</p> <p>Consult manufacturer for recycling option. Resene Paintwise accepts residual unwanted paint and packaging. See Resene website for Paintwise information. Or contact a Local Authority for the disposal information. Do not discharge the substance into the environment.</p> |
|------------------------------|--|

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package.

The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant | NO |
| HAZCHEM | *3YE |

Land transport (UN)

| | | | | | |
|------------------------------|--|--------------------|----------|------------------|----------------|
| UN number | 1263 | | | | |
| UN proper shipping name | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) | | | | |
| Transport hazard class(es) | <table> <tr> <td>Class</td><td>3</td></tr> <tr> <td>Subrisk</td><td>Not Applicable</td></tr> </table> | Class | 3 | Subrisk | Not Applicable |
| Class | 3 | | | | |
| Subrisk | Not Applicable | | | | |
| Packing group | II | | | | |
| Environmental hazard | Not Applicable | | | | |
| Special precautions for user | <table> <tr> <td>Special provisions</td><td>163; 367</td></tr> <tr> <td>Limited quantity</td><td>5 L</td></tr> </table> | Special provisions | 163; 367 | Limited quantity | 5 L |
| Special provisions | 163; 367 | | | | |
| Limited quantity | 5 L | | | | |

Air transport (ICAO-IATA / DGR)

| | | | | | |
|----------------------------|---|-----------------|---|---------------------|----------------|
| UN number | 1263 | | | | |
| UN proper shipping name | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) | | | | |
| Transport hazard class(es) | <table> <tr> <td>ICAO/IATA Class</td><td>3</td></tr> <tr> <td>ICAO / IATA Subrisk</td><td>Not Applicable</td></tr> </table> | ICAO/IATA Class | 3 | ICAO / IATA Subrisk | Not Applicable |
| ICAO/IATA Class | 3 | | | | |
| ICAO / IATA Subrisk | Not Applicable | | | | |

RESENE ETCH PRIMER

| | | |
|-------------------------------------|---|-------------|
| | ERG Code | 3L |
| Packing group | II | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | Special provisions | A3 A72 A192 |
| | Cargo Only Packing Instructions | 364 |
| | Cargo Only Maximum Qty / Pack | 60 L |
| | Passenger and Cargo Packing Instructions | 353 |
| | Passenger and Cargo Maximum Qty / Pack | 5 L |
| | Passenger and Cargo Limited Quantity Packing Instructions | Y341 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 1 L |

Sea transport (IMDG-Code / GGVSee)

| | | |
|-------------------------------------|--|----------------|
| UN number | 1263 | |
| UN proper shipping name | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) | |
| Transport hazard class(es) | IMDG Class | 3 |
| | IMDG Subrisk | Not Applicable |
| Packing group | II | |
| Environmental hazard | Not Applicable | |
| Special precautions for user | EMS Number | F-E , S-E |
| | Special provisions | 163 367 |
| | Limited Quantities | 5 L |

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

| HSR Number | Group Standard |
|------------|---|
| HSR002662 | Surface Coatings and Colourants (Flammable) Group Standard 2017 |

PHENOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

ISOPROPANOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

1,2,4-TRIMETHYL BENZENE IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

XYLENE IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

N-METHYL-2-PYRROLIDONE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Chemical Footprint Project - Chemicals of High Concern List

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data

New Zealand Inventory of Chemicals (NZIoC)

New Zealand Workplace Exposure Standards (WES)

Hazardous Substance Location

Continued...

RESENE ETCH PRIMER

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantity beyond which controls apply for closed containers | Quantity beyond which controls apply when use occurring in open containers |
|--------------|---|--|
| 3.1B | 100 L in containers greater than 5 L 250 L in containers up to and including 5 L | 50 L 50 L |

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Class of substance | Quantities |
|--------------------|---|
| 3.1B | 250 L (when in containers greater than 5 L) 500 L (when in containers up to and including 5 L) |

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory Status

| National Inventory | Status |
|---------------------|--|
| Australia - AICS | Yes |
| New Zealand - NZIoC | Yes |
| Legend: | Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

| | |
|----------------------|------------|
| Revision Date | 13/07/2020 |
| Initial Date | 12/10/2017 |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit.
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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